

## SEISMOLOGY.\*

## SEISMOLOGICAL REPORTS FOR FEBRUARY, 1919.

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TABLE 1.—Noninstrumental earthquake reports, February, 1919.

Day.	Approximate time, Greenwich Civil.	Station.	Approximate latitude.	Approximate longitude.	Intensity Rossi-Forel.	Number of shocks.	Duration.	Sounds.	Remarks.	Observer.
		CALIFORNIA.	° ,	° ,			Seconds.			
Feb. 9	H. m. 15 57	San Pedro.....	32 45	118 14	2	1	-----	None.....		Geo. Linder.
10	24 00	Bishop.....	32 22	118 24	5	1	0.1	None.....		Associated Press.
14	22 47	Calexico.....	32 41	115 30	2	1	-----	None.....		H. M. Rouse.
16	15 58	Bakersfield.....	35 22	119 00	4-5	3	-----	Rumbling.....	Awakened 1 people.....	F. W. Warthorst.
		Fairmont.....	34 15	118 25	5	1	10	Rumbling.....	Small bells rung.....	Wm. F. C. Lowe.
		Glenville.....	35 45	119 42	4	2	5	Rumbling.....	Sounds with second shock.....	C. H. Likely.
		Lindsay.....	36 13	119 08	3-4	1	5	Rattling.....		Basil Prior.
		Los Angeles.....	34 03	118 15	5	1	-----	Rumbling.....		R. A. Nelson.
		Maricopa.....	35 05	119 08	5	1	20	Rumbling.....		E. F. Foulike.
		Ojai.....	34 25	119 12	5	1	3	Faint.....		W. H. Duncan.
		San Luis Obispo.....	35 18	120 39	4	1	30	None.....		J. E. Hissong.
		San Pedro.....	33 45	113 14	4	1	-----	None.....		Geo. Linder.
		Santa Barbara.....	34 23	119 40	5	1	-----	None.....		Associated Press.
		Springville.....	36 07	118 50	-----	1	2	Rumbling.....		Mary Birkhead.
		Maricopa.....	35 05	119 08	2	1	10	Faint.....		E. F. Foulike.
17	20 00	Amos.....	33 05	115 16	2	1	30	None.....		A. W. Sullivan.
19	3 52	Barrett.....	32 43	116 46	4	1	3	None.....		L. Watts.
		Calexico.....	32 41	115 30	3	1	3	None.....		H. M. Rouse.
19	4 03	Calexico.....	32 41	115 30	2	1	30	None.....		H. M. Rouse.
19	4 55	Barrett.....	32 43	116 46	5	1	3	None.....		L. Watts.
		Brawley.....	32 59	115 40	4	1	-----	-----	Mud volcanoes active.....	M. D. Witter.
		Calexico.....	32 41	115 30	4	3	17	Rumbling.....	Sharp lurch, direction noticed.....	H. M. Rouse.
19	5 30	Amos.....	33 05	115 16	2	1	30	None.....		A. W. Sullivan.
19	13 23	Calexico.....	32 41	115 30	4	1	30	Rumbling.....	Several lighter shocks.....	H. M. Rouse.
20	3 59	Calexico.....	32 41	115 30	4	1	33	Rumbling.....		H. M. Rouse.
		Imperial.....	32 50	115 35	4	1	-----	None.....		Associated Press.
20	8 50	Lone Pine.....	36 37	118 01	4	1	4	Rattling.....		G. F. Marsh.
25	22 39	Berkeley.....	37 52	122 16	3	1	-----	None.....	Felt by persons at rest.....	Dr. E. F. Davis.
		Napa.....	38 18	122 20	5-6	3	5	Rumbling.....	Some bells rung.....	G. A. Lewis.
		Oakland.....	37 48	122 15	5	1	-----	None.....		Emma Smith.
		Peachland.....	38 23	122 48	4	1	2			E. H. Parnell.
		Petaluma.....	38 15	122 38	5	1	15	Rumbling.....	Some alarm.....	John Landis.
		Point Reyes.....	38 02	122 59	5	1	10	Rumbling.....		Mrs. John Kelly.
		San Francisco.....	37 48	122 26	3	1	4	None.....	Shook objects in tall buildings.....	U. S. Weather Bureau.
27	19 18	Calexico.....	32 41	115 30	2	1	5	None.....		H. M. Rouse.
		NEW MEXICO.								
1	4 30	Socorro.....	34 08	106 48	4-5	-----	20	Rumbling.....	Followed by 3 shocks.....	J. J. Leeson.
1	20 30	Socorro.....	34 08	106 48	5	-----	30	Rumbling.....	Some alarm.....	J. J. Leeson.

\* For explanation of abbreviations used in the following tables, see this REVIEW, January, 1919, p. 59.

## THE NEW SEISMOGRAPHS AT THE UNIVERSITY OF CHICAGO.

Two Milne-Shaw seismographs, one registering the east-west component the other the north-south component, have recently been installed by the Weather Bureau in Rosenwald Hall of the University of Chicago, the records from which for the months of January and February, 1919, together with the constants of the instruments appear in this number of the REVIEW. The horizontal pendulum of each instrument carries a "steady" mass of only 454 grams. The registration is photographic and is obtained by means of a simple but effective optical train that includes a delicately balanced rotating mirror. The concrete pier upon which the in-

struments are mounted rests upon bed rock 62' 10" below the level of the floor of the seismograph room. While some difficulty is experienced on account of the location, both as to tilting and wind disturbances, the records are for the most part excellent. The machines are maintained and operated by the Weather Bureau in cooperation with the University of Chicago.

The Milne-Shaw seismograph is described in detail in a Handbook on the instrument by the maker J. J. Shaw, West Bromwich, England, and, briefly, in the Report of the British Association for the Advancement of Science for 1915, page 57.—R. H. FINCH.